



**The effect of multi-vitamin/mineral supplementation on mortality during treatment of pulmonary tuberculosis
a randomised two-by-two factorial trial in Mwanza, Tanzania**

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P175: Food & Nutrition Intervention for Health (Others) IV

P175-01

EVALUATION OF THE FOLLOW-UP FOR THE EFFECT OF A NUTRITION EDUCATION PROGRAM TO REDUCE DIETARY SODIUM

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This study was to evaluate the follow-up effect of a nutrition education program to reduce dietary sodium and to modify their preference for salty foods. A total of 240 schoolchildren in the city of Daegu, Korea, participated in this study for four weeks. The effects of nutrition education were evaluated before education, after 4 weeks of education, and after 3 months of education. In the salty taste assessment, there was no significant difference between before education and after 3 months. In high-salt dietary attitude, the score for salty taste reached the highest level (3.67 ± 0.40), and for unsalty taste reached the lowest (0.50 ± 0.93) after 3 months. There was a significant improvement (8.34 ± 1.82) after 3 months in nutrition knowledge ($p < 0.001$) and in high-salt dietary attitude ($p < 0.001$). Therefore, the education was effective in improving eating attitude and nutrition knowledge but a systemic diverse and intensive educational access is needed to change students preference for salty taste and a high-salt diet.

P175-02

EMERGING CONSUMER NUTRITION EDUCATION TRENDS IN SOUTH AFRICA

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This poster/presentation will provide insight into emerging trends in South Africa regarding nutrition education tools utilized for consumer education. The process followed in developing Food-based Dietary Guidelines (FBDG) specifically for the South African population, throughout the lifecycle and all cultural groups, will be expanded upon. Special emphasis will be placed on the FBDG for healthy persons older than 7 years which have been adopted by the National Department of Health as the national guidelines.

Awareness will be raised regarding the increased usage of nutrition education tools and educational programs in major supermarket groups around South Africa. Improvement of menu offerings in prominent quick service restaurants (QSR) as part of the social responsibility drive, will be highlighted. Current and forthcoming examples of visual displays in food labeling and health claims within the context of the emerging food labeling legislation will be provided. Advances in the use of technology in nutrition education for utilization by registered health care professionals, will be given.

P175-03

THE EFFECT OF MULTI-VITAMIN/MINERAL SUPPLEMENTATION ON MORTALITY DURING TREATMENT OF PULMONARY TUBERCULOSIS: A RANDOMISED TWO-BY-TWO FACTORIAL TRIAL IN MWANZA, TANZANIA

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RATIONALE: Malnutrition is common in pulmonary tuberculosis (TB), and may impair survival.

OBJECTIVE: The objective of this study was to assess effects of multi-vitamin/mineral (MVM) and zinc (Zn) supplementation during TB treatment on mortality.

MATERIALS AND METHODS: Patients diagnosed with sputum-positive pulmonary TB in Mwanza, Tanzania, were randomized, using a two-by-two factorial design, to Zn (45 mg) or placebo, and MVM (vitamins A, B, C, D, E, and selenium and copper) or placebo. Survival status was ascertained at the end

of the 8-month TB treatment and supplementation period.

RESULTS AND FINDINGS: Of 499 TB patients, 213 (43 %) had HIV. The mean weight gain at 7 months was 6.88 kg (95% CI 6.36, 7.41). Zn and MVM combined, but neither alone (interaction, $P = 0.03$), increased weight gain by 2.37 kg (95% CI 0.91, 3.83), irrespective of HIV status. Survival status at 8 months was determined for 422 patients (84.6 %), of which fifty-two (12.3 %) had died. Among fifty-two deaths, there were no effects of MVM (relative risk (RR) 0.73; 95% CI 0.43, 1.23) and Zn (RR 0.76; 95% CI 0.46, 1.28). However, among HIV co-infected patients, marginally significant effects of both MVM (RR 0.60; 95% CI 0.34, 1.05) and Zn (RR 0.63; 95% CI 0.37, 1.08) were seen, and MVM and Zn combined reduced mortality (RR 0.29; 95% CI 0.10, 0.80; interaction ratio 0.52).

CONCLUSION: Supplementation with MVM, including Zn, during treatment of pulmonary TB may reduce mortality in those co-infected with HIV. A randomised trial of the effect of the combined intervention used in this study should be conducted in a different setting to confirm the finding.

P175-04

ADHERENCE TO PHYSICAL ACTIVITY IN OLDER ADULTS: AN INDIVIDUAL OR A CONTEXTUAL ISSUE?

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Adherence to physical activity (PA) interventions is critical for ensuring effectiveness; however the relative contribution of individual, intervention-related, and contextual factors to adherence is still unclear. We used multilevel linear regression models to assess individual (i.e. sex, age, smoking, depression) intervention-related (e.g. satisfaction with intervention, distance) and neighborhood predictors (e.g. poverty, safety, community groups) of PA adherence in 996 Chilean elderly from 10 health centers assigned to a PA intervention. We found that adherence to the intervention was low ($X = 23.3\%$; SE: 24.9). Individual factors were strong predictors of PA adherence (Depression $\beta = -8.01$, 95%CI: -11.48, -4.54; working status $\beta = 4.84$, 95%CI: -8.74; -0.93, and exercise history $\beta = 6.51$, 95%CI: 2.31; 10.71) while intervention-related and neighborhood factors were not significantly associated to PA adherence after controlling the effect of individual-level variables ($p > 0.05$). Overall, health center level explained only 2% of total PA adherence. In conclusion, adherence to a PA intervention was mainly predicted by individual-level variables. Individual characteristics of the target population have to be considered when tailoring and designing exercise programs for older adults in order to increase their effectiveness.

P175-05

EFFECTIVENESS OF A COMMUNITY RESISTANCE TRAINING INTERVENTION ON INSULIN RESISTANCE IN OLDER PEOPLE

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Resistance training (RT) is recommended in the promotion of physical activity in older adults but their potential effect on insulin resistance (IR) is uncertain. The aim of this study was to assess the effectiveness of a 24-mo RT intervention on IR in a community setting. A total of 491 older adults, aged 65 to 68 y, with glucose tolerance normal and diabetes were studied. Half of the subjects were randomly assigned to a RT intervention two times a week. IR was defined by HOMA-IR higher than 2.41. The prevalence of IR post-intervention was 25% in the intervention group and 39% in the control group ($p < 0.001$). Of the 85 participants with diabetes at baseline, 59% were no classified as having IR in the intervention group versus 31% in the control group ($p < 0.001$). Negative binomial regression models showed that compared with controls, the incidence rate ratio for insulin resistance, after adjustment for potential confounders was 0.75 [95% CI: 0.58–0.97] for diabetics and 0.87 [95% CI: 0.64–1.12] for non-diabetics. In conclusion, resistance training is a feasible option as treatment strategy on insulin resistance in type 2 diabetes. These findings lend further support to current public recommendations on physical activity for older adults.